348/363
2712
Q01eZC

09/031767

FIG. 1

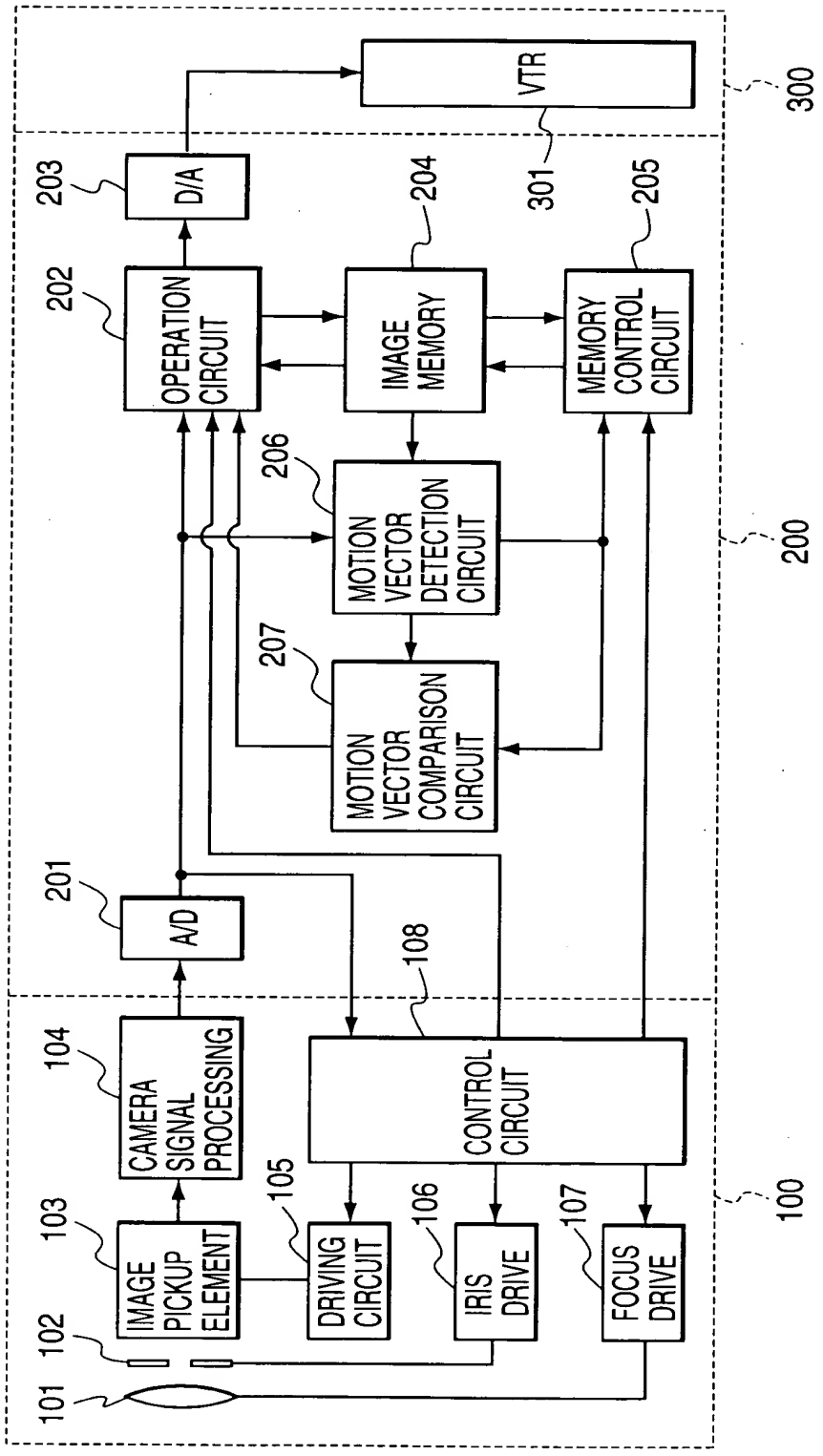


FIG. 2

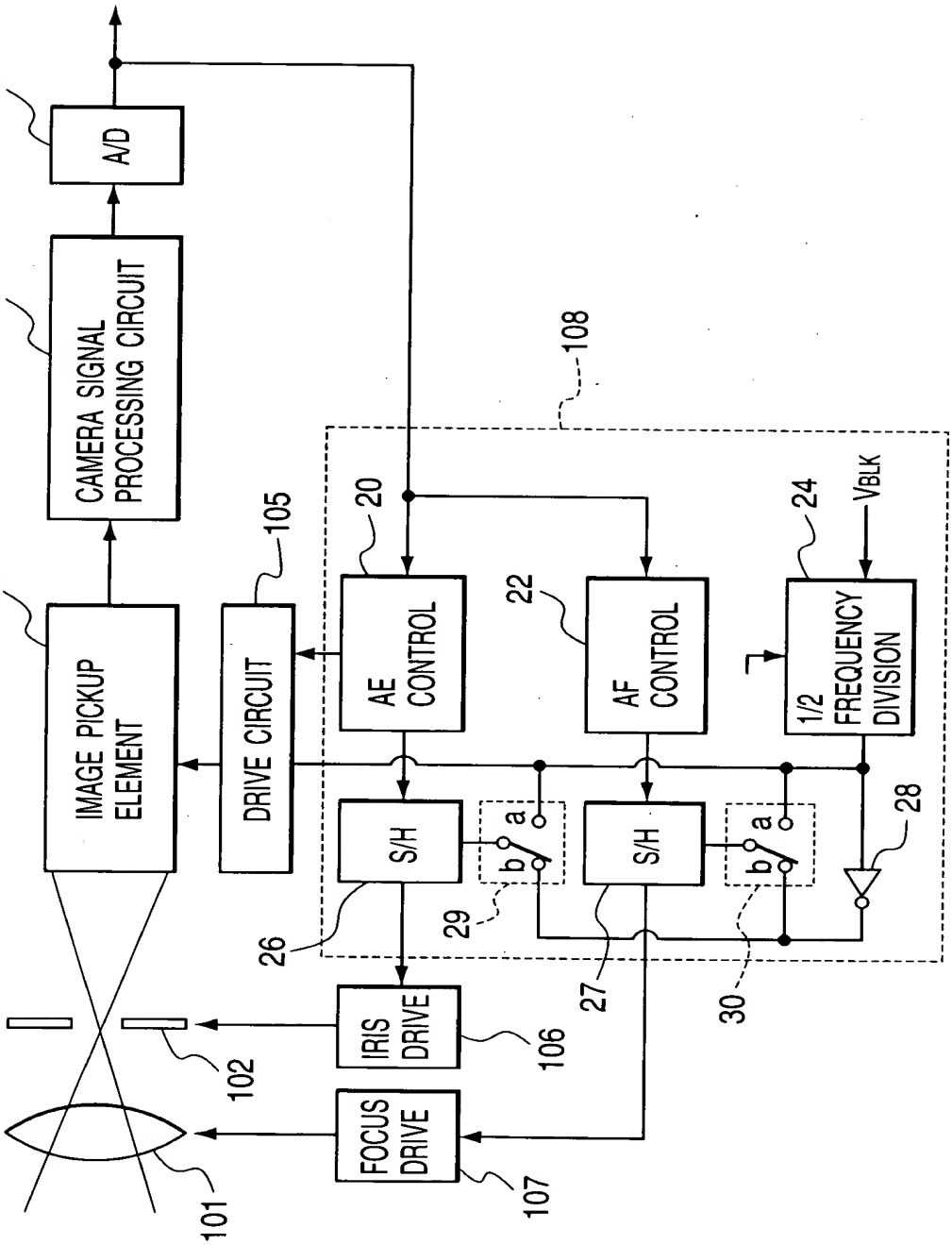

201
A/D
104
CAMERA SIGNAL PROCESSING CIRCUIT
103
IMAGE PICKUP ELEMENT
105
DRIVE CIRCUIT
108
20
AE CONTROL
22
AF CONTROL
24
1/2 FREQUENCY DIVISION
VBLK
28
S/H
S/H
a
b
a
b
26
29
27
30
IRIS DRIVE
106
FOCUS DRIVE
107
102
101

FIG. 3

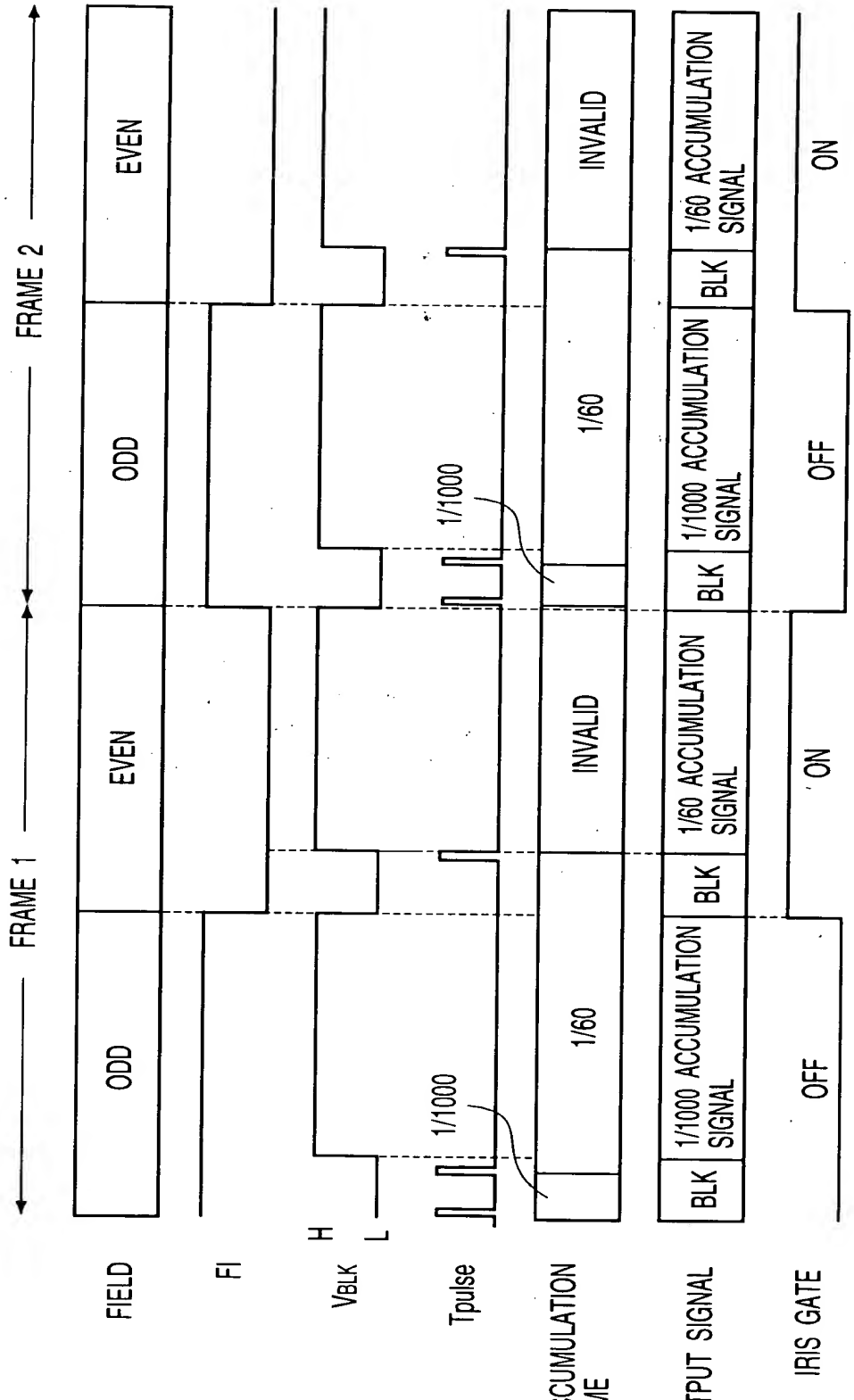

FRAME 1
FRAME 2
FIELD
ODD
EVEN
ODD
EVEN
FI
VBLK
H
L
Tpulse
1/1000
1/1000
ACCUMULATION TIME
1/60
INVALID
1/60
INVALID
OUTPUT SIGNAL
BLK
1/1000 ACCUMULATION SIGNAL
BLK
1/60 ACCUMULATION SIGNAL
BLK
1/1000 ACCUMULATION SIGNAL
BLK
1/60 ACCUMULATION SIGNAL
IRIS GATE
OFF
ON
OFF
ON

FIG. 4

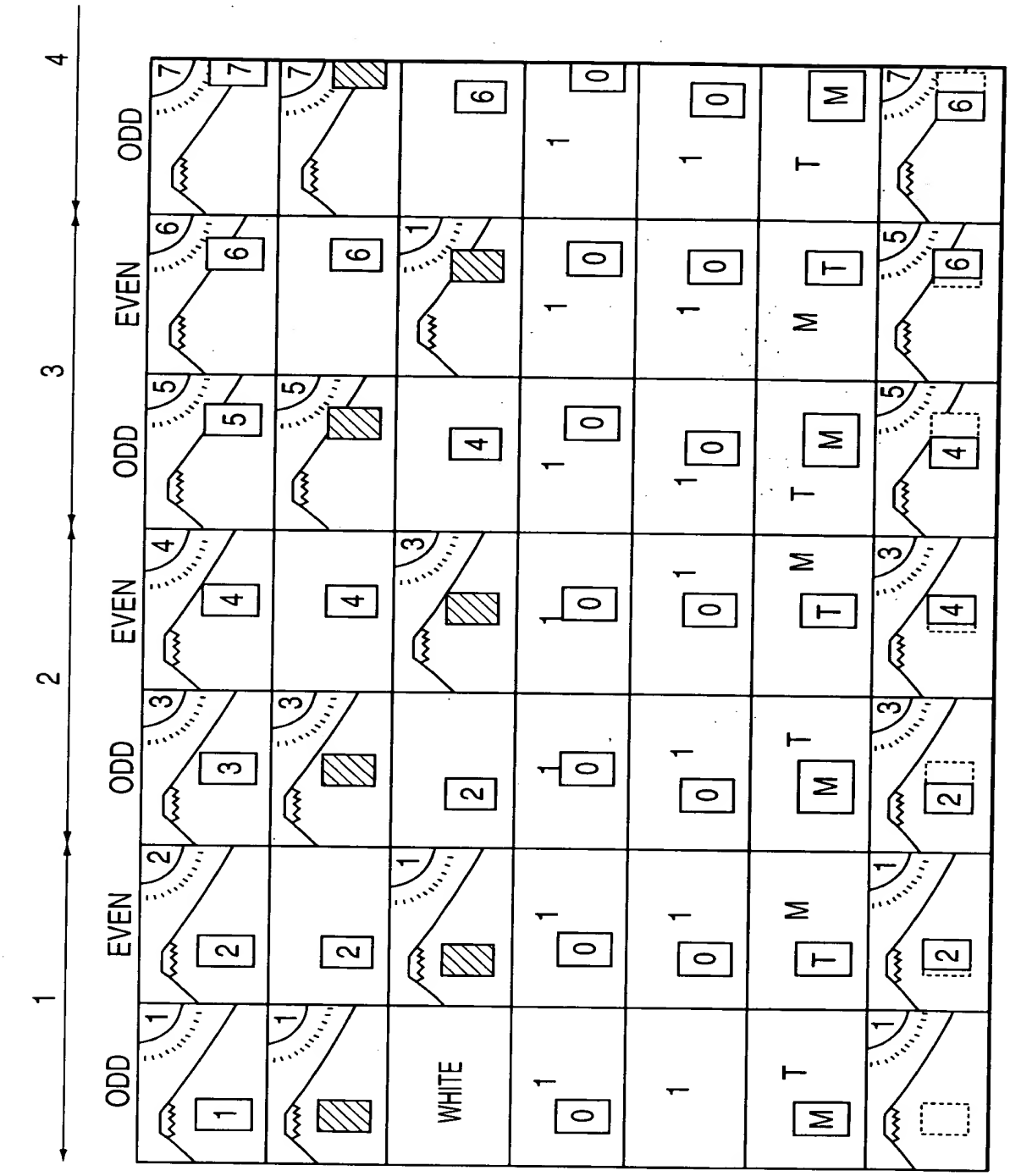

1
2
3
4
ODD
EVEN
ODD
EVEN
ODD
EVEN
ODD
OBJECT
(T) THROUGH IMAGE
(M) MEMORY IMAGE
WHITE
DISCRIMINATION A
DISCRIMINATION B
SELECTION FLAG (A & B)
OUTPUT IMAGE

FIG. 5

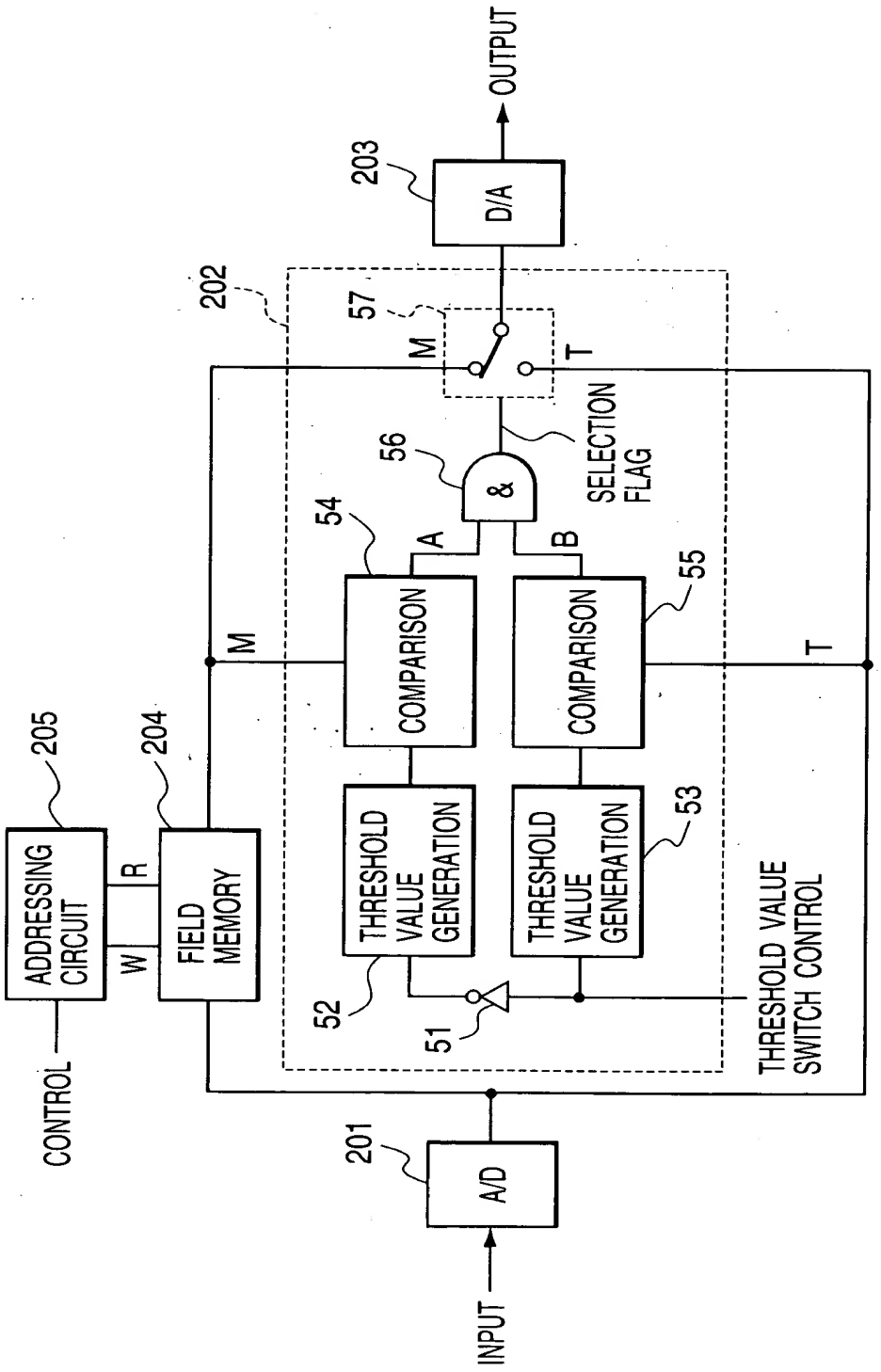

INPUT
A/D
201
OUTPUT
D/A
203
202
57
M
T
SELECTION FLAG
56
&
54
A
B
55
COMPARISON
COMPARISON
M
T
THRESHOLD VALUE GENERATION
THRESHOLD VALUE GENERATION
53
52
51
THRESHOLD VALUE SWITCH CONTROL
205
204
ADDRESSING CIRCUIT
R
W
FIELD MEMORY
CONTROL

FIG. 6A

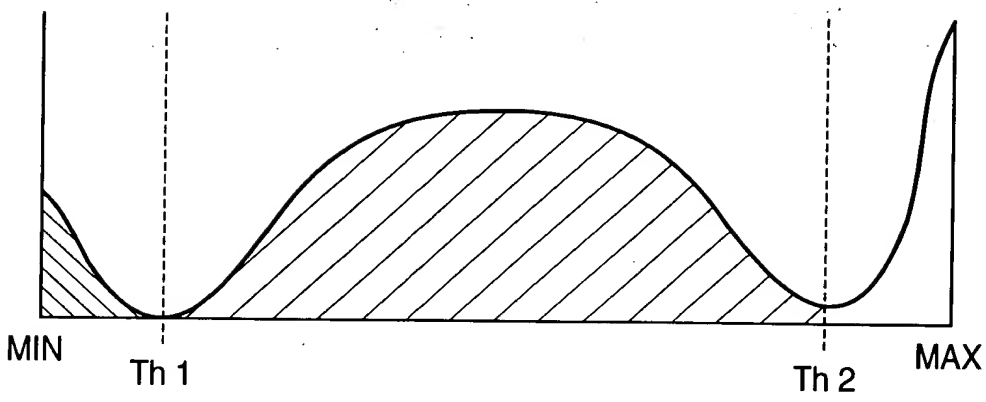


FIG. 6B

FIELD	T (THROUGH)	M (MEMORY)
ODD	Th 1	Th 2
EVEN	Th 2	Th 1

FIG. 7A

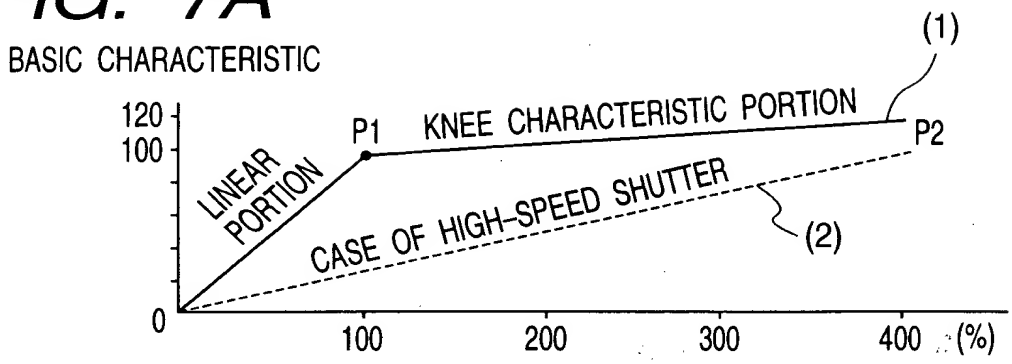


FIG. 7B

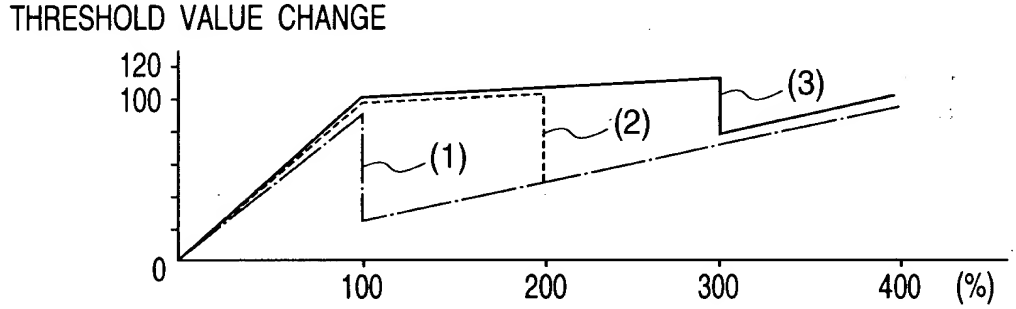


FIG. 7C

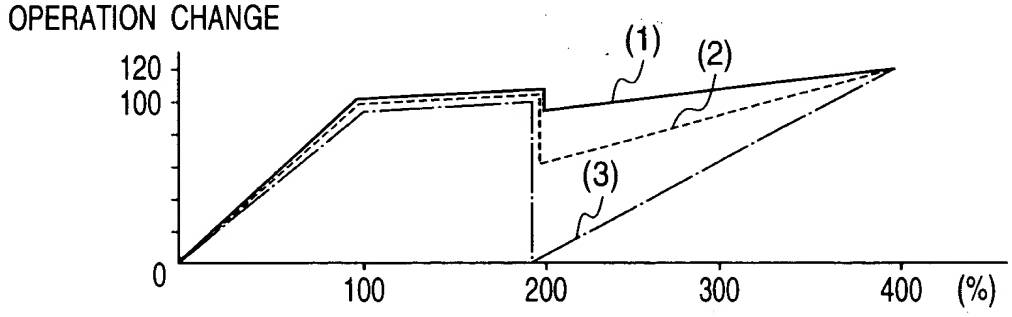


FIG. 7D

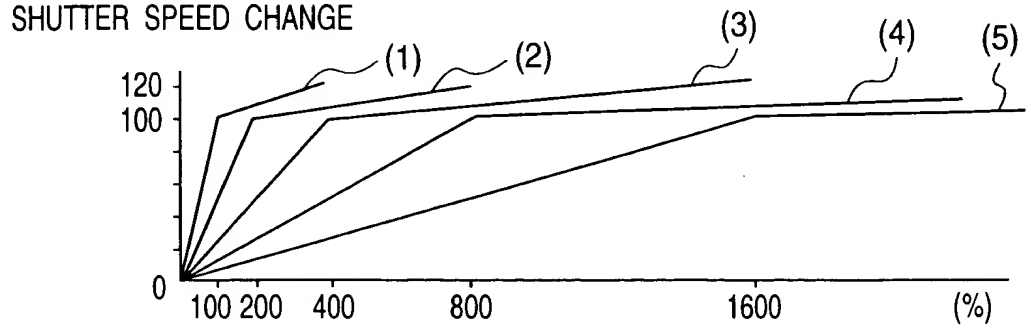


FIG. 8

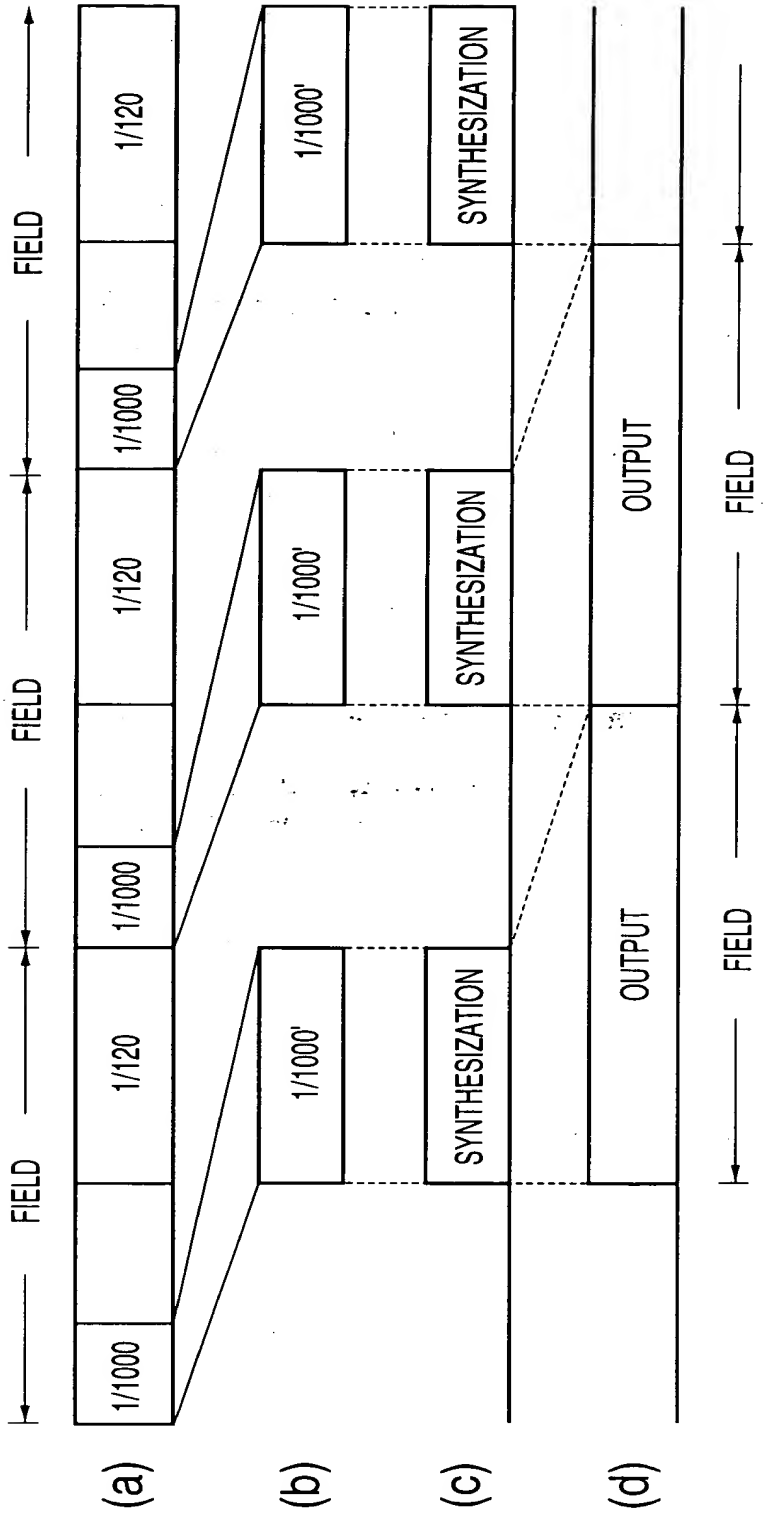

FIELD
FIELD
FIELD
FIELD
1/1000
1/120
1/1000
1/120
1/1000
1/120
1/1000
1/120
1/1000'
1/1000'
1/1000'
SYNTHESIZATION
SYNTHESIZATION
SYNTHESIZATION
OUTPUT
OUTPUT
(a)
(b)
(c)
(d)

FIG. 9

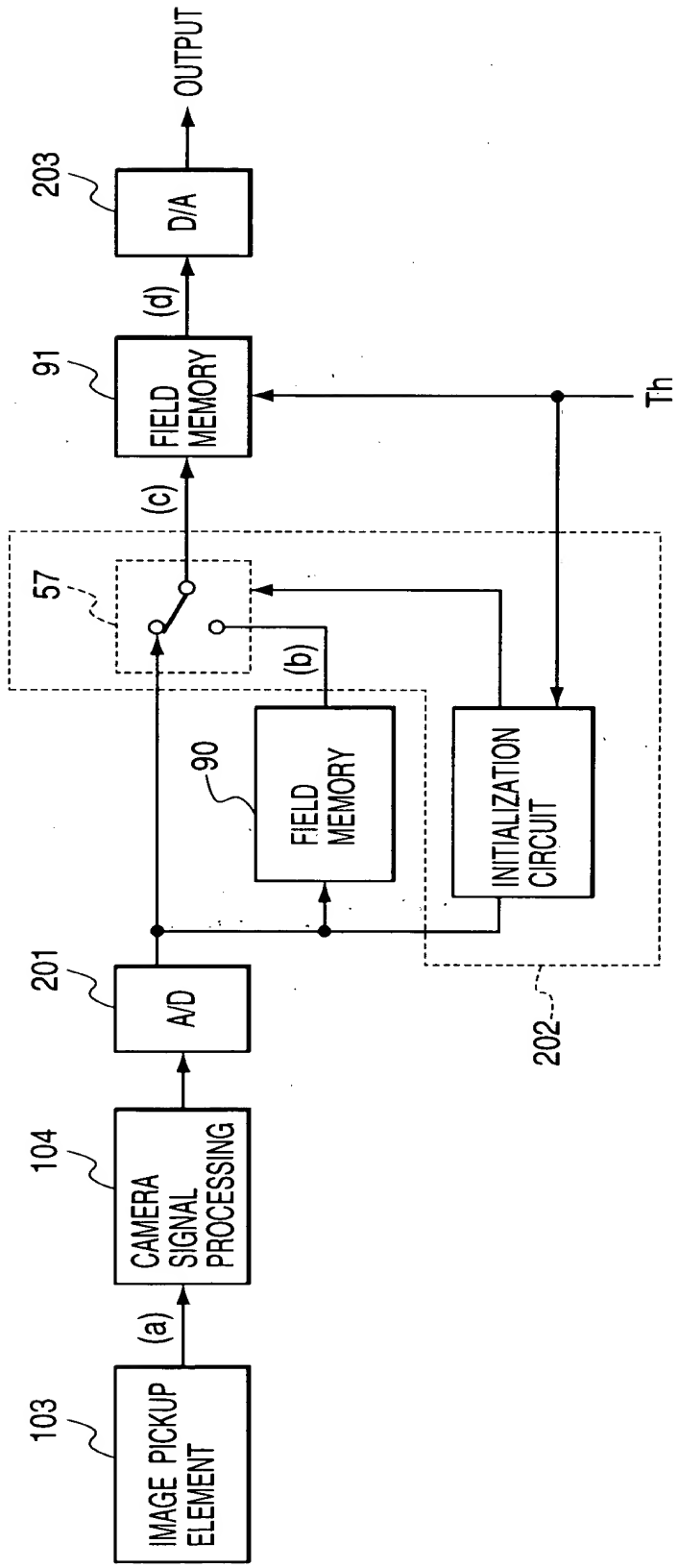

103
IMAGE PICKUP ELEMENT
(a)
104
CAMERA SIGNAL PROCESSING
201
A/D
202
57
(b)
90
FIELD MEMORY
INITIALIZATION CIRCUIT
(c)
91
FIELD MEMORY
Th
(d)
203
D/A
OUTPUT

FIG. 10

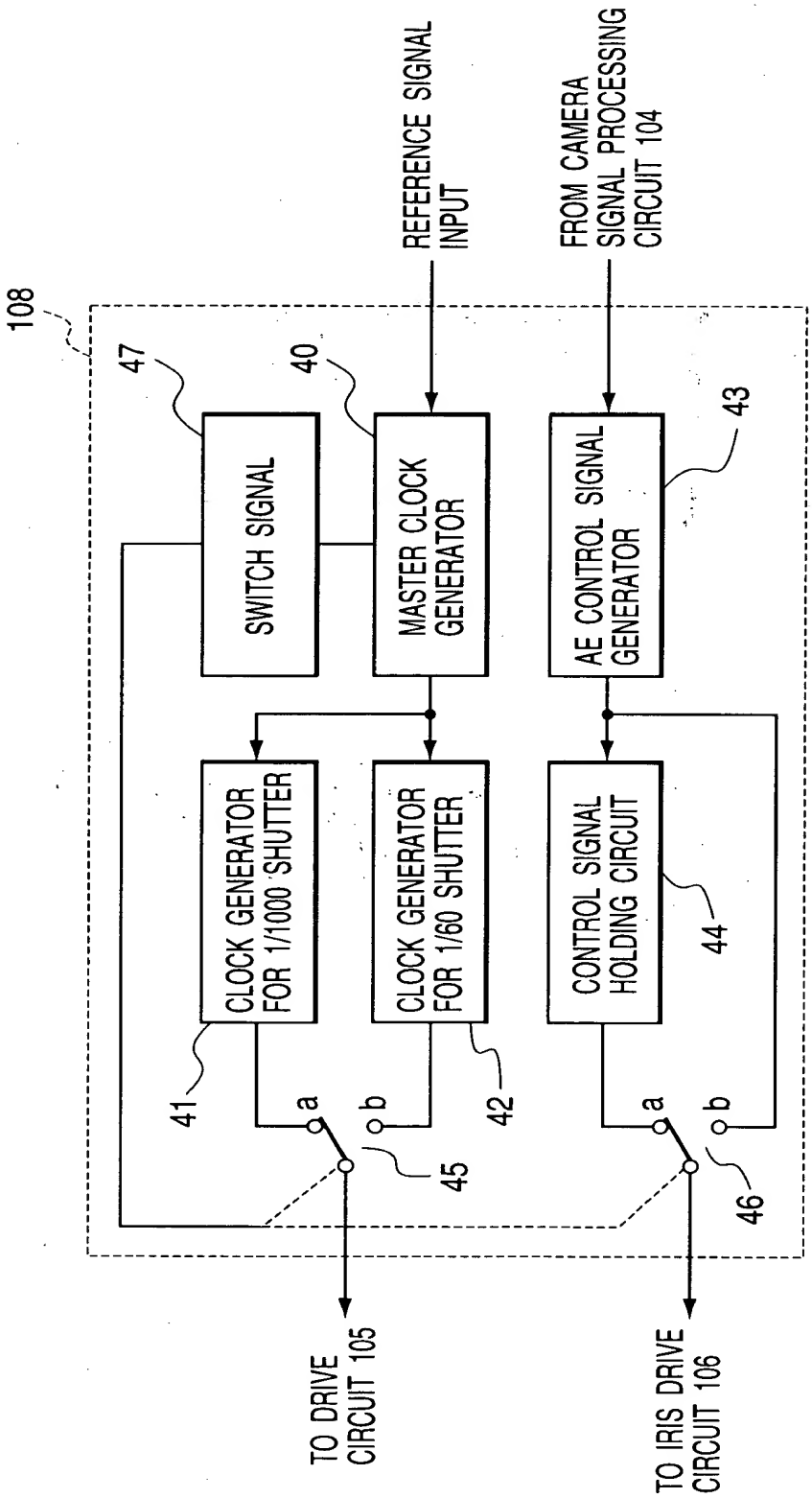

108
REFERENCE SIGNAL INPUT
FROM CAMERA SIGNAL PROCESSING CIRCUIT 104
47
40
43
SWITCH SIGNAL
MASTER CLOCK GENERATOR
AE CONTROL SIGNAL GENERATOR
CLOCK GENERATOR FOR 1/1000 SHUTTER
CLOCK GENERATOR FOR 1/60 SHUTTER
CONTROL SIGNAL HOLDING CIRCUIT
41
42
44
a
b
a
b
45
46
TO DRIVE CIRCUIT 105
TO IRIS DRIVE CIRCUIT 106

FIG. 11A

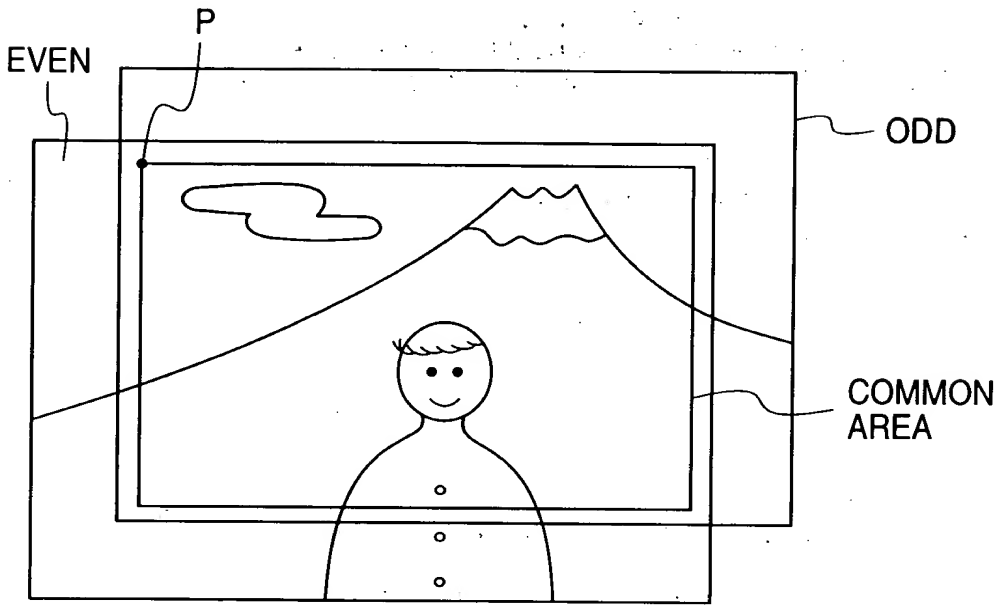


FIG. 11B

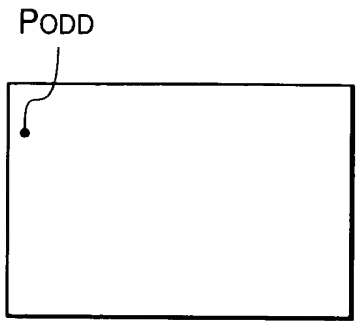


FIG. 11C

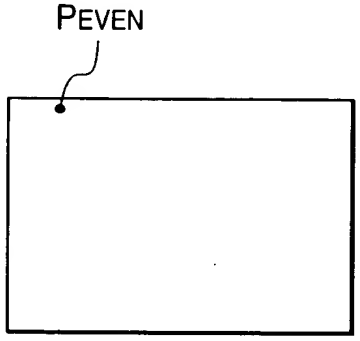


FIG. 12

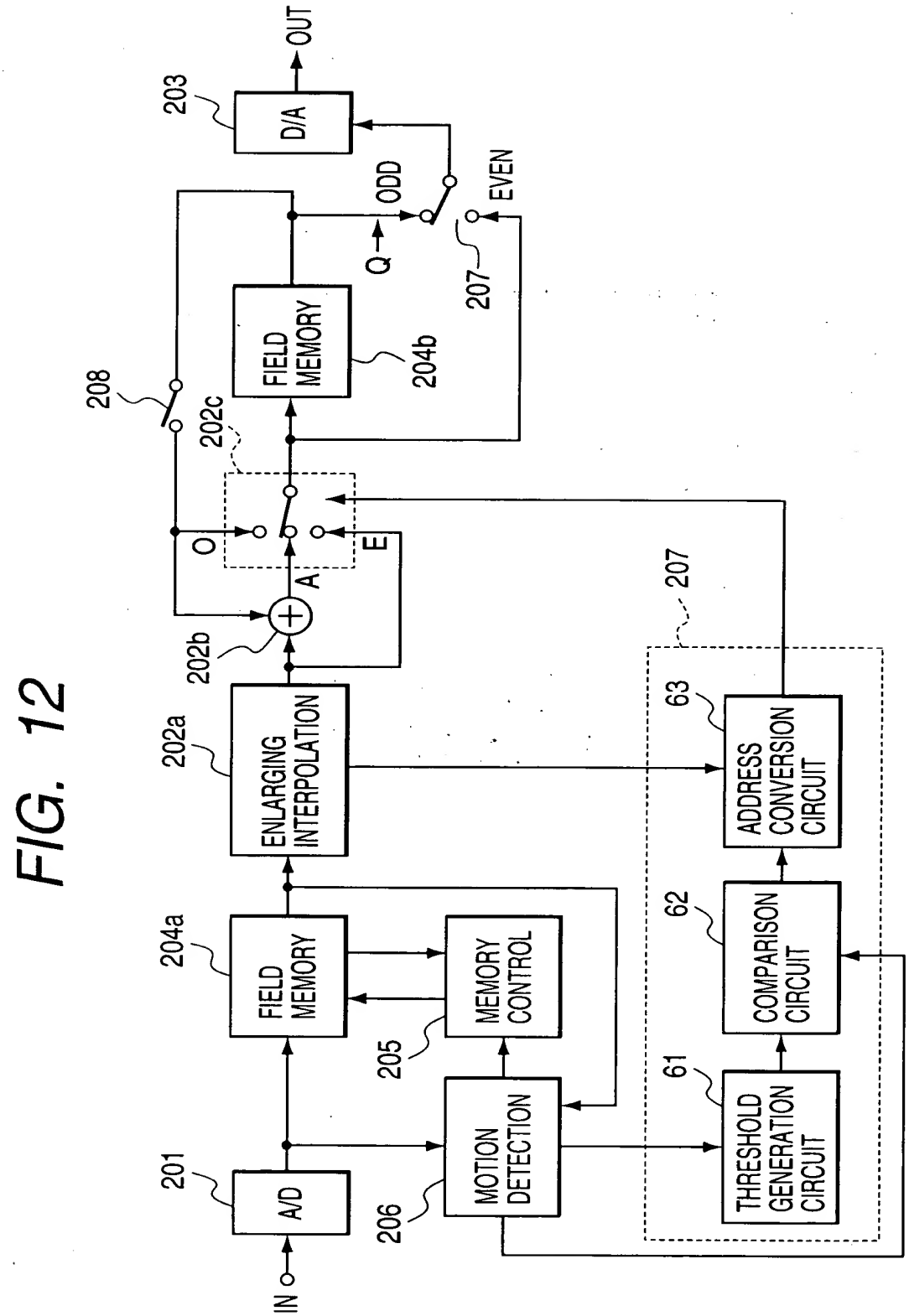
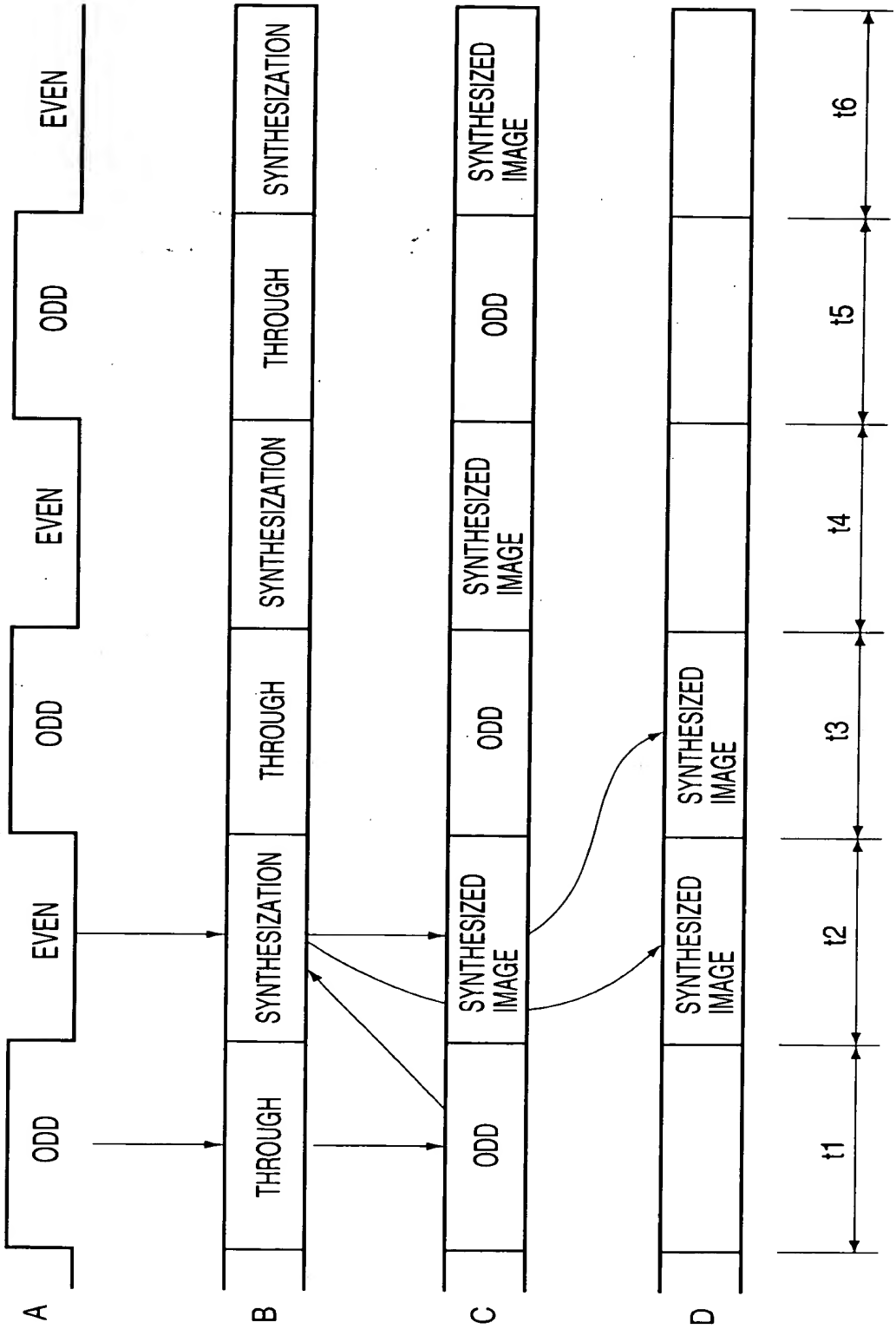

IN
A/D
201
FIELD MEMORY
204a
ENLARGING INTERPOLATION
202a
MOTION DETECTION
206
MEMORY CONTROL
205
ADDRESS CONVERSION CIRCUIT
63
COMPARISON CIRCUIT
62
THRESHOLD GENERATION CIRCUIT
61
207
202b
202c
O
E
A
208
FIELD MEMORY
204b
Q
ODD
EVEN
207
D/A
203
OUT

FIG. 13


A
B
C
D
ODD
EVEN
ODD
EVEN
ODD
EVEN
THROUGH
SYNTHESIZATION
THROUGH
SYNTHESIZATION
THROUGH
SYNTHESIZATION
ODD
SYNTHESIZED IMAGE
ODD
SYNTHESIZED IMAGE
ODD
SYNTHESIZED IMAGE
t1
t2
t3
t4
t5
t6